Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

1. (Previously Presented) A method for optimizing response time of physical devices in a data storage system comprising:

collecting statistics for each of the physical devices;

determining from the statistics *n* most active of the physical devices; and

for each of the *n* most active of the physical devices, adjusting a mirror service policy associated with one or more mirrored logical volumes serviced by the physical device to reduce seek time.

2. (Original) The method of claim 1, wherein the statistics include utilization and wherein adjusting is performed if the utilization of the physical device is greater than a threshold value.

3. (Original) The method of claim 1, wherein adjusting comprises:

using a cost function analysis to determine that workload assigned to the one or more selected mirrored logical volumes according to a current mirror service policy can be re-assigned to a corresponding mirrored copy according to a new mirror service policy, the cost function analysis indicative of seek time and involving the selected physical device and any physical device on which a mirrored copy resides.

4. (Original) The method of claim 3, wherein the physical devices involved in the cost function analysis are physical mirrors.

5. (Original) The method of claim 3, wherein using comprises;

computing cost functions for each of the physical devices involved in the cost function analysis and determining a maximum value from the computed cost functions, based on the current mirror service policy and the new mirror service policy.

6. (Original) The method of claim 5, wherein using comprises:

determining that the reassignment of workload can be made if the maximum value based on the new mirror service policy is less than the maximum value based on the current policy.

7. (Original) The method of claim 6, wherein adjusting comprises processing the one or more logical volumes in a sequence beginning with the outermost logical volume bordering logical volumes serviced by another physical device.

8. (Original) The method of claim 7, wherein, for each successive one of the processed logical volumes, the new mirror service policy of an immediate predecessor of the processed logical volumes is used as the current mirror service policy for the cost function analysis.

9. (Original) The method of claim 2, wherein the threshold value comprises fifty percent.

10. (Previously Presented) A computer program product residing on a computer readable medium for optimizing response time of physical devices in a data storage system, comprising instructions for causing a computer to:

collect statistics for each of the physical devices;

determine from the statistics *n* most active of the physical devices; and

for each of the *n* most active of the physical devices, adjust a mirror service policy associated with a mirrored logical volume services by the physical device to reduce seek time.

11. (Currently Amended) A data storage system comprising:

physical devices having mirror logical volumes stored thereon;

a storage controller for controlling access to the physical devices; and

wherein the storage controller collects for the physical devices statistics including utilization, determines from the statistics *n* most active of the physical devices and, for each of the *n* ~~of the~~ most active of the physical devices, adjusts a mirror service policy

associated with a mirrored logical volume serviced by the physical device to minimize seek time when the utilization is greater than a threshold value.

12. (Previously Presented) The computer program of claim 10 wherein the mirror service policy is adjusted in response to simulation of a new mirror service policy.

13. (Currently Amended) The computer program of claim 12 wherein the mirror service policy is adjusted in response to a cost function analysis of ~~the~~ a selected one of the *n* most active physical devices as a result of a current mirror service policy and a cost function analysis of the selected physical device as a result of the new mirror service policy.

14. (Previously Presented) The computer program of claim 11 wherein the mirror service policy is adjusted in response to simulation of a new mirror service policy.

15. (Currently Amended) The computer program of claim 14 wherein the mirror service policy is adjusted in response to a cost function analysis of ~~the~~ a selected one of the *n* most active physical devices as a result of a current mirror service policy and a cost function analysis of the selected physical device as a result of the new mirror service policy.

16. (New) The method of claim 1 further comprising sorting the *n* most active of the physical devices by activity level and wherein the mirror service policy is adjusted for each of the *n* most active of the physical devices in the sorted order.

17. (New) The computer program product of claim 10 further comprising instructions for causing a computer to sort the *n* most active of the physical devices by activity level and wherein the mirror service policy is adjusted for each of the *n* most active of the physical devices in the sorted order.

18. (New) The data storage system of claim 11 wherein the storage controller sorts the *n* most active of the physical devices by activity level and wherein the mirror service policy is adjusted for each of the *n* most active of the physical devices in the sorted order.